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PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number (Optional) 108298727US	
	Application Number 10/636,021-Conf. #1017	Filed August 6, 2003	
	First Named Inventor Palsulich et al.		
	Art Unit 1765	Examiner M. Dahimene	
<p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>This request is being filed with a notice of appeal.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.</p> <p>I am the</p> <p><input type="checkbox"/> applicant /inventor.</p> <p><input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)</p> <p><input type="checkbox"/> attorney or agent of record. Registration number _____</p> <p><input checked="" type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34. <u>51,945</u></p> <p> Signature</p> <p><u>Chen Liang</u> Typed or printed name</p> <p><u>(206) 359-8000</u> Telephone number</p> <p><u>January 17, 2007</u> Date</p> <p>NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.</p>			
<p><input checked="" type="checkbox"/> *Total of <u>1</u> forms are submitted.</p>			

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: DAVID A. PALSULICH *ET AL.*
APPLICATION No.: 10/636,021
FILED: AUGUST 6, 2003
FOR: **MICROFEATURE WORKPIECE
PROCESSING SYSTEM FOR, E.G.,
SEMICONDUCTOR WAFER ANALYSIS**

EXAMINER: MAHMOUD
DAHIMENE
ART UNIT: 1765
CONF. No: 1017

ARGUMENTS FOR PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicants submit a Notice of Appeal and the following arguments for consideration by the conference panel. Applicants respectfully submit that the arguments identify clear errors in the rejection of the claims, and respectfully request reconsideration of this application.

ARGUMENTS

Applicants' amendment filed on August 8, 2006, includes a listing of the claims on pages 2-7 and a summary of claim 1 on pages 8 and 9. In response to applicants' previous amendment, claims 1-9, 11-17, 19-27, and 49 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,054,373 to Tomita et al. ("Tomita") in view of U.S. Patent No. 5,762,755 to McNeilly et al. ("McNeilly"), and claims 10, 18, and 28 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Tomita in view of U.S. Patent No. 6,399,517 to Yokomizo et al. ("Yokomizo"). The present issues for appeal, therefore, are (1) whether the combined teachings of Tomita and McNeilly support a Section 103 rejection of claims 1-9, 11-17, 19-27, and 49; and (2) whether the combined teachings of Tomita and Yokomizo support a Section 103 rejection of claims 10, 18, and 28.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. M.P.E.P. § 2143. If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). Second, there must be a reasonable expectation of success. *In re Rinehart*, 531 F.2d 1048, 189 U.S.P.Q. 143 (CCPA 1976). Finally, the prior art references must teach or suggest all the claim limitations. M.P.E.P. § 2143. "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 U.S.P.Q. 494 (CCPA 1970).

Issue 1

Tomita and McNeilly do not support a *prima facie* case of obviousness over claim 1 because (1) there is no suggestion to modify the references or to combine reference teachings, (2) there is not a reasonable expectation of success for such a modification, and (3) the combined teachings do not teach or suggest all the claim limitations of claim 1.

First, neither Tomita nor McNeilly provide any suggestion to combine the references to come up with the claimed subject matter. Assuming, for the sake of argument, that Tomita's

quartz beaker corresponds at least in part to the processing chamber of claim 1, Tomita does not teach or suggest that the quartz beaker can have a polymeric wall. Contrarily, using a processing chamber with a polymeric wall would likely render Tomita's process unsatisfactory for its intended purpose because Tomita teaches etching a silicon wafer at a temperature at least 200°C and as high as possible so long as the temperature is below the boiling point of the etchant. (Tomita at column 7, lines 33-36). In one example, the highest treatment temperature can be about 290°C to 350°C when sulfuric acid is used as the etchant. (Tomita at column 5, lines 62-65). If McNeilly's polymeric material (e.g., Teflon® AF and FEP) is used to form Tomita's beaker, Tomita's etching temperature could not be as high as possible because the service temperature of McNeilly's polymeric material may restrict Tomita's etching temperature. For example, continuous exposure of FEP to temperatures above 200°C is not recommended. *Perry's Chemical Engineers' Handbook 5th Edition*, 23-51 (Robert H. Perry ed., 1984). Even assuming that the etchant is at a higher temperature than the beaker walls, the FEP walls can still prevent Tomita's etching temperature from being "as high as possible" because at least the inside surface of the walls must contact the heated etchant. As a result, one skilled in the art would not use a beaker with polymeric walls when Tomita teaches that the etching temperature should be as high as possible to sufficiently remove metallic impurities from a wafer surface.

Further, there is no need for one skilled in the art to modify Tomita's teachings such that Tomita's "beaker walls could [be polymeric and] possibly be cooled from the outside of the beaker with a cooled air flow ..., or the heating action is provided in a pulse short enough to allow heating of the substrate/etchant interface without heating the container walls," as suggested by the Examiner (Office Action, October 17, 2006, page 17). Tomita discloses that its beaker is made of quartz to withstand a high temperature etchant such as sulfuric acid. As a result, external cooling is not necessary for Tomita's process because Tomita's beaker already can handle the high etching temperature. Thus, having external cooling only adds cost and complexity to Tomita's process for apparently no benefit.

McNeilly also does not teach or suggest that the processing chamber can have a polymeric wall. Instead, McNeilly discloses a window assembly 9 that includes an upper window 10 made from 1/2" fused quartz and a lower window 8 that can be made from a corrosion resistant material such as Teflon® AF or FEP. (McNeilly at column 12, lines 40-42). In one example, the layer of FEP can be 2–5 millimeters thick. (McNeilly at column 13, lines 8-

12). Thus, McNeilly's lower window 8 is merely a coating layer on the upper window 10 for corrosion protection. McNeilly actually teaches away from having a completely polymeric window assembly because McNeilly discloses that the two-window assembly is used to assure strength. (McNeilly at column 12, lines 40-42). Thus, McNeilly clearly suggests that if the upper quartz window 10 is removed from the window assembly 9, the window assembly 9 might not have sufficient strength. As a result, McNeilly does not provide any suggestion or motivation to one skilled in the art for using a processing chamber having a polymeric wall.

Second, there is no reasonable expectation of success for such a modification because the operating environment of Tomita is different than that of McNeilly. Tomita discloses a liquid etching apparatus that contains a liquid, such as concentrated sulfuric acid. McNeilly, on the other hand, discloses a vapor etching apparatus that contains only a vapor etchant. As one skilled in the art recognizes, the corrosion resistance and structural strength characteristics of materials can vary widely when contacting a liquid instead of a vapor. For example, a material resistant to a gas might not be resistant to a liquid of the same substance. As a result, there is no reasonable expectation of success to replace a component in a liquid etching apparatus with a component from a vapor etching apparatus.

Finally, even if Tomita and McNeilly were to be combined, the combined teachings do not teach or suggest all the claim limitations of claim 1. As discussed above, Tomita discloses a quartz beaker, and McNeilly discloses a window assembly that includes a polymeric lower window and a quartz upper window. As a result, if the two references were to be combined, the resulting apparatus would be a quartz beaker having a window assembly that includes a polymeric lower window and a quartz upper window. Thus, the combined teachings of Tomita and McNeilly do not teach or suggest a processing chamber that has a polymeric wall.

As there is no suggestion or motivation to modify or to combine Tomita and McNeilly, no reasonable expectation of success for such a modification or combination, and the combined teachings do not teach or suggest all the claim limitations of claim 1, Tomita and McNeilly do not support a *prima facie* case of obviousness of claim 1. Claims 11, 19, and 49 contain subject matter that is generally similar to that of claim 1. Tomita and McNeilly also do not support a *prima facie* case of obviousness of claims 2-9, 12-17, and 20-27 because these claims depend from claims 1, 11, or 17 and contain additional features.

Issue 2

Tomita and Yokomizo do not support a *prima facie* case of obviousness over claims 10, 18, and 28. As described above, Tomita fails to teach or suggest at least one feature of claims 1, 11, and 19, and Yokomizo fails to fill this void. Specifically, Yokomizo does not disclose or suggest a processing chamber having a polymeric wall. Instead, Yokomizo discloses "a process bath 10 that includes an inner bath 11 made of quartz to store the etching liquid E and an outer bath 12 also made of quartz to receive the etching liquid E." Accordingly, the combined teachings of Tomita and Yokomizo do not support a *prima facie* case of obviousness over claims 10, 18, and 28 for the reasons discussed above and for the additional features of these claims.

Accordingly, the pending claims are allowable because the cited references do not support a Section 103 rejection of the pending claims. In view of these errors, applicants respectfully request reconsideration of this application.

Date: 1/17/07

Respectfully submitted,

Perkins Coie LLP

A handwritten signature in black ink, appearing to read 'Chen Liang', is written over a horizontal line.

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